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# Views of the Downward Extension: Comparing the Youth Version of the Psychopathy Checklist with the Youth Psychopathic traits Inventory

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**Increasing interest in ''juvenile psychopathy'' has been met with scholarly debate about the validity of directly extending the adult construct of psychopathic personality disorder to youth. To inform this debate, this study of 160 serious adolescent offenders compared two alternative, adult-based conceptualizations of juvenile psychopathy: that of the Psychopathy Checklist: Youth Version (PCL:YV) and the self-report Youth Psychopathic traits Inventory (YPI). The results indicate that these two conceptualizations overlap only partially, with the YPI focusing more tightly on core interpersonal and affective features than the PCL:YV. Each conceptualization is reliable and predicts different forms of short-term institutional misbehavior. However, only the YPI possesses a theoretically coherent, inverse association with anxiety. Despite this promise, these conceptualizations of psychopathy are less strongly associated with one another than they are with psychosocial markers of developmental maturity. This raises questions about their divergent validity and ability to identify a disorder that will remain stable during the transition from adolescence into adulthood. Implications for future longitudinal research on the validity, manifestations, and course of juvenile psychopathy are discussed. Copyright © 2003 John Wiley & Sons, Ltd.**

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# INTRODUCTION

Over recent years, researchers and practitioners have manifested increasing interest in the construct of "juvenile psychopathy," in part because of its utility in predicting aggressive and violent behavior (Edens, Skeem, Cruise, & Cauffman, 2001). This interest has been accompanied by scholarly debate about the validity of this construct (e.g. Edens et al., 2001b; Frick, 2002; Hart, Watt, & Vincent, 2002; Lynam, 2002; Seagrave & Grisso, 2002). Most relevant research has directly extended the adult construct of psychopathic personality disorder, a distinctive constellation of interpersonal, affective, and behavioral traits, downward to youth. This work is built upon a fundamental assumption that the features manifested by adult psychopaths will, when exhibited in youth, identify a small subgroup of offenders who are maturing into psychopaths and will persist in frequent and serious antisocial behavior into adulthood (see Forth & Burke, 1998).

Critics have argued that this assumption must be tested in longitudinal research, given that several features of adult psychopathy (e.g. sensation seeking, irresponsibility) are normative and temporary characteristics of adolescence (Edens et al., 2001b; Seagrave & Grisso, 2002; see also Achenbach, 1995; American Psychiatric Association, 1994, p. 631). Although recent research indicates that measures of juvenile psychopathy relate in a theoretically coherent manner to external variables, the current state of the science is such that "... we can reliably identify something in adolescents that is [at least phenotypically] similar to psychopathy in adults and that is associated with future criminality... The problem is that we have no strong or direct evidence the thing we are measuring is actually psychopathy *per se*, a stable personality disorder that does not dissipate over time" (Vincent & Hart, 2002, p. 157).

The tenor of this debate is driven in part by the relevance of psychopathy to public policy and legal decision-making (see Otto & Heilbrun, 2002). Scholars who study juvenile psychopathy express hope of identifying an important subgroup of adolescents for the purpose of early intervention (e.g. Andershed, Kerr, Stattin, & Levander, 2002; Forth & Mailloux, 2000; Frick, 2002; Lynam, 2002). Targeting high-risk groups for intensive treatment is a vital goal. In monetary terms, effectively preventing a single high-risk youth from becoming a career criminal would save society more than $1.3 million (Cohen, 1998). Nevertheless, skeptics believe that juvenile psychopathy is more likely to be used as an exclusionary than inclusionary criterion for treatment, based on questionable perceptions that psychopathy is untreatable (compare Ogloff, Wong, & Greenwood, 1990; O'Neill, Lidz, & Heilbrun, 2003; Rice, Harris, & Cormier, 1992; with Salekin, 2002; Salekin, Rogers & Machin; 2001; Skeem, Monahan, & Mulvey, 2002). Given the current political climate, measures of juvenile psychopathy may become used to inform a variety of treatment and legal decisions with adverse long-term consequences for youth deemed psychopathic (Edens, Skeem et al., 2001b; see also Zinger & Forth, 1998).

To inform this important debate about the validity and appropriateness of "juvenile psychopathy," more data on its nature, course, and etiology are needed. Such information is necessary before this construct can be justifiably embraced as a tool for routine clinical practice. One means of increasing our understanding of the *nature* of juvenile psychopathy is to compare alternative conceptual models for its assessment. This is the focus of the present investigation, which compares the

 

dominant measure of juvenile psychopathy, the Youth Version of the Psychopathy Checklist (PCL:YV; Forth, Kosson, & Hare, 2003) with a promising self-report measure of juvenile psychopathy, the Youth Psychopathic traits Inventory (YPI; Andershed et al., 2002b).

## Psychopathy Checklist:Youth Version

The PCL:YV is based upon the Revised Psychopathy Checklist (PCL-R; Hare, 1991, 2003), which has become viewed as the gold standard for assessing adult psychopathy (see Skeem, Mulvey, & Grisso, 2003). Like its parent measure, the PCL:YV consists of 20 items or ''traits'' that an interviewer rates, based on interview and file data, for their degree of match to the offender in question (from 0, item does not apply, to 2, item applies). The PCL:YV is designed for adolescents age 12 years and older. Although the PCL:YV traits are essentially identical to those of the PCL-R, the trait descriptions of the PCL:YV were rationally adapted to better reflect adolescents' life experiences (in school, peer, and family domains). As currently designed (Forth et al., 2003), the PCL:YV is a direct downward extension of the two-factor PCL-R adult model of psychopathy. According to this model, psychopathy is comprised of two factors: (1) interpersonal and affective features, or ''the selfish, callous, and remorseless use of others,'' and (2) behavioral features, or ''a chronically unstable and antisocial lifestyle'' (see Harpur, Hare, & Hakistan, 1989). Thus, the PCL:YV items are divided into ''Factor 1'' and ''Factor 2'' scales (Forth et al., 2003). Forth and her colleagues (2003) suggest that adopting the PCL-R threshold score of 30 for diagnosing psychopathy would be reasonable, but no empirically derived cut scores are available (see Forth & Mailloux, 2000).

### *Psychometric Properties*

Despite its recommended two-scale composition, the factor structure of the PCL:YV is unclear. Forth's (1995) exploratory analysis suggested the *a priori* two-factor solution, but the results of two confirmatory factor analyses (Brandt, Kennedy, Patrick, & Curtin, 1997;[1] Kosson, Cyterski, Steuerwald, Neumann, & Walker-Matthews, 2002) suggest that this model inadequately fits the data. Based on a sample of 115 adolescent probationers, Kosson and his colleagues (2002) found mixed support (good absolute fit; poorer relative fit) for a three-factor PCL:YV structure. This structure was adapted from the three-factor model of adult psychopathy of Cooke and Michie (2001), which in turn was based on application of item response theory and confirmatory factor analyses to several large PCL-R datasets. This three-factor model (i) splits items traditionally associated with Factor 1 into Interpersonal (''Arrogant and deceitful interpersonal style'') and Affective (''Deficient affective experience'') features, and (ii) creates a Lifestyle dimension (''Impulsive and irresponsible behavioral style''), by eliminating several items historically associated with Factor 2 but found to be poor indicators of

[1]Although Brandt et al. (1997) concluded that the two-factor model fit their data, their reported fit indices indicated inadequate fit.

 

psychopathy. By de-emphasizing nonspecific indices of deviant and criminal behavior, the model ''places the definition of psychopathy firmly within the domain of personality pathology'' (Cooke & Michie, 2001). In keeping with the study by Kosson and colleagues (2002) of juvenile offenders, this three-factor model has fit data better than the traditional two-factor model in both adult correctional (Cooke & Michie, 2001) and psychiatric (Skeem, Mulvey, & Grisso, 2003) samples.[2]

Reports on the PCL:YV's reliability typically focus on the full scale. At the total score level, the instrument possesses adequate internal consistency ($\alpha = 0.79$–$0.83$) and excellent inter-rater reliability (ICC = 0.80–0.93, Forth & Burke, 1998; Kosson et al., 2002). However, estimates of inter-rater reliability for the individual PCL:YV scales and items have not been published to date, nor have assessments of the PCL:YV's test–retest reliability (Edens, Skeem et al., 2001).

Most investigations of the PCL:YV have focused on its predictive utility for behavior problems (Kosson et al., 2002). Several studies support the moderate predictive utility of the PCL:YV for symptoms of externalizing disorders and behavior problems including crime and violence (for a review, see Edens et al., 2001b; see also Kosson et al., 2002; Ridenour, Marchant, & Dean, 2001). This is true even when the overlap between the PCL:YV (antisocial behavior) and the criterion (antisocial behavior) has been controlled by omitting relevant PCL:YV items (see, e.g., Kosson et al., 2002).

## *Limitations and Unanswered Questions*

Recently, Kosson et al. (2002) departed from the predominant focus on the PCL:YV's covariation with behavior problems to determine whether the measure was associated with external indices of the core affective and interpersonal anomalies considered central to adult psychopathy (Hare, 1998). The authors found mixed support for the PCL:YV's construct validity. First, they found that total PCL:YV scores were moderately ($r = 0.37$) associated with independent ratings of psychopathy based on observations of interpersonal behavior and self-reported ratings of closeness to family members ($r = -0.35$) and attachment to parents ($r = -0.33$). This clearly supports the convergent validity of the measure. However, the PCL:YV also was significantly and *positively* associated with a well validated measure of anxiety or negative affectivity ($r = 0.25$), in keeping with the results of Bauer's (2001; as cited by Kosson et al., 2002) unpublished study of female juvenile offenders (cf. Brandt et al., 1997). This finding is inconsistent with the mixed results obtained in adult samples. Even the PCL-R, which also includes nonspecific indices of antisocial behavior, is negatively associated or unassociated with diverse measures of anxiety, neuroticism, and fear (Hare, 1991, 2003; Schmitt & Newman, 1999).

Kosson et al. (2002) explain this contrast by speculating that juvenile psychopaths may have ''not yet developed the same impenetrable mask of sanity'' (p. 106) that they ostensibly will as adults. In our view, the finding that more highly anxious youth tend to obtain higher scores on the PCL:YV raises questions about the validity

[2]Notably, an alternative four-factor construction has been proposed for the PCL-R (Hare, 2003). In this alternative construction, all of the original 20 items are retained (the model splits both Factor 1 and Factor 2 into two components). If the PCL:YV model adopts this four-factor model, it will be open to criticism that it is overly loaded with antisocial and potentially changeable behavior.

 

of this measure. This finding contradicts the widespread (if implicit) notion that psychopaths possess an innate affective deficit. Theoretically, such a deficit would be present throughout the lifespan, rather than being expressed only in adulthood.

In fact, there is empirical support for Cleckley's (1964) seminal contention that "psychopaths are very sharply characterized by a lack of anxiety" (p. 271). The PCL-R appears to capture both "low anxious" and "high anxious" adult psychopaths (or primary and secondary psychopaths, respectively; see Kosson & Newman, 1995; Schmitt & Newman, 1999; Skeem, Poythress, Edens, Lilienfeld, & Cale 2003). However, only "low anxious" or primary psychopaths manifest deficits in their emotional responsiveness and information processing, including a reward-oriented response style (Kosson & Newman, 1995; Newman, Patterson, Howland, & Nichols, 1990; Newman & Schmitt, 1998; see also Fagan & Lira, 1980; Goldman, Lindner, Dinitz, & Allen, 1971). Given that "high anxious" or secondary adult psychopaths do not manifest such deficits, it is troubling that the PCL:YV appears *positively* associated with measures of anxiety.

To date, research has not addressed the basic question of the extent to which the PCL:YV taps construct irrelevant variance associated with developmental features of adolescence. This arguably is a central aspect of the divergent validity of the PCL:YV, which seeks to assess putatively stable personality features. The PCL:YV includes modifications of PCL-R items that seem developmentally inapplicable (e.g., *parasitic lifestyle*) or inappropriate for adolescents (e.g., *need for stimulation*). Indeed, many of these items are not viewed as prototypic of youth psychopathy by clinical child psychologists (Salekin et al., 2001). These items may tap deficits in such aspects of maturity as responsibility, temporal and social perspective-taking, and temperance that evolve during the transition from adolescence to adulthood, according to the model of Steinberg and Cauffman (1996). As these socio-emotional capacities develop, purported "traits" of psychopathy may decline. There is evidence that age is moderately inversely associated with "Factor 2" scores on the PCL measures (Brandt et al., 1997; Harpur & Hare, 1994) and that adolescents obtain their highest scores on such items as *need for stimulation* and *impulsivity* (Forth & Burke, 1998), but there have been no direct investigations to date of the relation between measures of psychopathy and psychosocial maturity.

In addition to its positive association with anxiety and unknown relation to maturity, there are some practical problems with the PCL:YV. First, like the PCL-R, the PCL:YV was not designed, and is not well suited, for identifying psychopathy in non-criminal populations. Relative to seminal theories of psychopathy (Cleckley, 1941), the PCL measures overemphasize antisocial behavior (see Skeem & Mulvey, 2001; Skeem, Mulvey, & Grisso, 2003). This fails to account for the fact that psychopaths may be well represented in school, business, and other "non-referred" community settings (see Hare, 1991). Second, the PCL:YV is resource intensive, requiring several hours of work from a well trained clinician, including a review of corroborating records (which can be nonexistent, unavailable, or incomplete), for each assessment. This prohibits systematic assessment of psychopathy in resource-poor environments, as well as large-scale or "general population" research (Andrews & Bonta, 2003).

Recognition of such limitations has led to increased interest in self-report measures of psychopathy. Early investigations in the youth (Brandt et al., 1997) and adult literature suggested that select scales from such general self-report

 

personality inventories as the MMPI correlated only moderately with PCL Factor 2 and negligibly with Factor 1 (e.g., Cooney & Litt, 1990; Edens, Hart, Johnson, Johnson, & Olver, 2000; Haapsalo & Pulkkinen, 1992; Hare, 1985; Harpur et al., 1989). However, more recent research suggest that such specific measures as the Psychopathic Personality Inventory (PPI; Lilienfeld & Andrews, 1996) are more strongly associated with PCL Factor 1 and other theoretically relevant constructs (Edens, Poythress, & Lilienfeld, 1999; Poythress, Edens, & Lilienfeld, 1998; see also Edens, Cruise, & Buffington-Vollum, 2001; Edens, Buffington-Vollum, Colwell, Johnson, & Johnson, 2002; Salekin Rogers, & Sewell, 1997). This provides evidence that self-report psychopathy scales can assess the core construct they purport to measure. To date, however, few self-report measures of juvenile psychopathy (see, e.g., Caputo, Frick, & Brodsky, 1999) have been developed and systematically investigated.

## Youth Psychopathic Traits Inventory

In this study, we investigate a promising self-report measure of psychopathy-like features for adolescents: The Youth Psychopathic traits Inventory (YPI; Andershed, Kerr et al., 2002). The YPI was developed as a research instrument for identifying a small group of youth ages 12 and above who will persist in frequent and serious antisocial behavior into adulthood. Like the PCL:YV, the YPI was based on contemporary adult models of psychopathy (Cleckley, 1941; Cook & Michie, 2001; Hare, 1991). Nevertheless, the YPI is unique in its (i) focus on core features of psychopathy, (ii) assessment approach, and (iii) community-based development.

First, the YPI focuses on the central traits of psychopathy (Factor 1, in PCL terms) and is not ''loaded'' with nonspecific indices of antisocial behavior. The YPI heavily emphasizes the interpersonal, affective, and, to a lesser extent, lifestyle traits of the ''psychopathic personality constellation'' to the exclusion of the ''more behavioural consequences of psychopathic personality traits'' (Andershed, Kerr et al., 2002, p. 135). The YPI consists of ten scales designed to capture ''core'' traits included in the PCL-R: *dishonest charm, grandiosity, lying, manipulation, remorselessness, callousness, unemotionality, impulsiveness, irresponsibility,* and *thrill seeking.* It excludes seven nonspecific PCL-R features that Cooke and Michie (2001) found were poor indicators of psychopathy, and three additional PCL-R features that the authors apparently believed might also lie ''causally downstream'' from psychopathy.[3] Notably, many of these jettisoned features have been criticized as developmentally inappropriate for youth (Edens, Skeem et al., 2001; Seagrave & Grisso, 2002). Theoretically, then, the YPI could tap features that are more likely to be stable than other measures.

The YPI's focus on core traits of psychopathy is consistent with the results of Frick's work, which suggests the importance of distinguishing between two groups of youth with early-onset conduct problems: those who are impulsive and those who are callous and unemotional (Frick & Ellis, 1999). This work is based largely on use

[3]The two groups of omitted items were (i) promiscuous sexual behavior, many short-term marital relationships, poor behavior controls, early behavior problems, juvenile delinquency, criminal versatility, and revocation of conditional release, and (ii) parasitic orientation, lack of long-term goals, and failure to accept responsibility for actions, respectively.

 

of the Antisocial Process Screening Device (APSD; Frick & Hare, 2001).[4] Several studies suggests that the Callous/Unemotional (CU) scale of the APSD identifies youth who have serious behavioral problems with a potentially distinctive etiology. Among youth with conduct problems, CU features have been uniquely linked with sensation-seeking behavior (Frick et al., 1994; Frick, Lilienfeld, Ellis, Loney, & Silverthorn, 1999), greater fearlessness (Barry et al., 2000), specific social information-processing patterns (Pardini, Lochman, & Frick, 2003), a reward-oriented response style (O'Brien & Frick, 1996), hyporesponsiveness to threatening and distressing cues (Blair, 1999), and emotional processing deficits (Loney et al., 2003). Notably, the relation between CU features and aggression in children does not appear to be moderated by the quality of parenting (Wootton, Frick, Shelton, & Silverthorn, 1997). The YPI's focus on interpersonal and affective features also is consistent with recent work conducted by Vincent and colleagues, who found that, of the interpersonal, affective, and behavioral features tapped by the PCL:YV, the behavioral features are the least informative about the latent trait of psychopathy among adolescents (Vincent, Hart, & Corrodo, 2002), and the affective features may be the most generalizable across developmental stages (Vincent, 2003).

After focusing on core traits of psychopathy, the second unique feature of the YPI is that its items were written to assess target traits in a relatively comprehensive (five items per trait) and indirect, nontransparent manner. In keeping with contemporary strategies for developing self-report measures of personality disorder (see Klein et al., 1993; Lilienfeld & Andrews, 1996), the YPI items do not frame psychopathic traits as deficits (e.g. ''My emotions are more shallow than others'''), but instead as characteristics that should seem neutral or even appealing to those with psychopathic traits (e.g. ''I usually feel calm when other people are scared''). This reduces the likelihood that youth with such traits will deny that they possess them because they are obviously socially undesirable or malignant.

The third unique aspect of the YPI is that it was developed and validated with an unselected community-based sample. This sample consisted of 1,024 16-year-old adolescents in a medium-sized Swedish community (80% of those eligible). As noted earlier, the PCL-R, which is the basis of most measures of adolescent psychopathy, was developed with criminal populations, which may account for its heavy weighting of nonspecific antisocial behaviors (see Skeem, Mulvey, & Grisso, 2003), relative to the core attributes of psychopathy (Cleckley, 1941). The use of representative community samples may promote more accurate understanding of the construct of youth psychopathic-like traits.

### *Psychometric Properties*

Because the YPI is a relatively new measure, published data on its psychometric properties are limited. With the original validation sample, Andershed, Kerr et al.

[4]The APSD is a 20-item rating scale (with versions for parents, teachers, and self-report) that was rationally derived from the PCL-R and other measures. Although the factor structure of the self-report version used with adolescent offenders is unknown (Loney, Frick, Clements, Ellis, & Kerlin, 2003), a two-scale model of Callous–Unemotional (CU) and Impulsivity/Conduct Problems (I/CP) features is often used with referred samples (see Frick, O'Brien, Wooton, & McBurnett, 1994; Frick, Bodin, & Barry, 2000). The ASPD's CU and I/CP scales correspond conceptually to the PCL model's Factor 1 (interpersonal and affective) and Factor 2 (behavioral) scales, respectively, although, as discussed below, data on this correspondence are mixed.

 

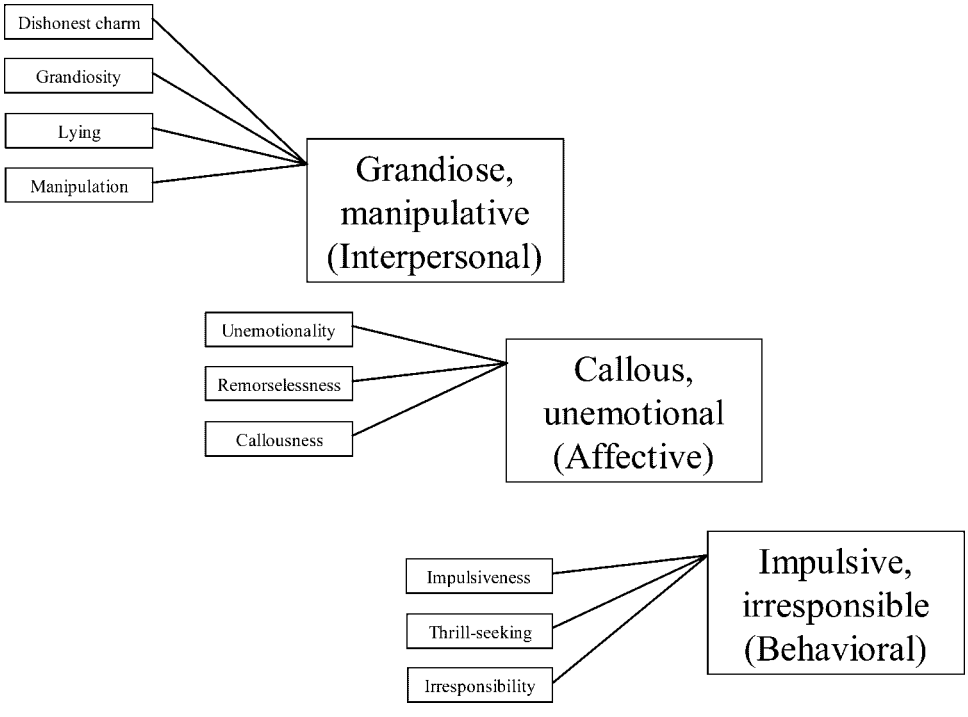


Figure 1. YPI factors.

(2002) found that the YPI's ten scales were internally consistent ($\alpha = 0.66$–$0.93$, average $= 0.74$) and conformed very well with their hypothesized three-factor structure (see Cook & Michie, 2001) of Interpersonal, Affective, and Lifestyle dimensions (CFI $= 0.98$ for both boys and girls), shown in Figure 1. The YPI generally was moderately associated with a range of deviant behavior, including (i) self-report indices of the age of first contact with the police, early behavior problems, and conduct problems, and (ii) teacher ratings of problem behaviors.

Given the purpose of the YPI, the authors placed particular emphasis on whether the measure could identify a ''psychopathy-like'' subgroup of conduct disordered adolescents. The authors cluster analyzed these adolescents' scores on the three YPI factors, perhaps expecting to find an ''impulsive, irresponsible, non-psychopathic'' group (high only on the lifestyle factor), and a ''psychopathy-like'' group (high on all three factors).[5] For the male sample ($n = 113$), they found two groups who were differentiated by scores on all three factors (one was relatively low; the other, relatively high). As predicted, the latter, ''psychopathy-like'' group obtained significantly higher scores than the other group on most indices of antisocial behavior tested. Recently, Andershed, Kerr, and Stattin (2002) replicated these cluster analytic results, as well as the three-factor structure of the YPI and its relation to antisocial behavior, with an independent community sample of 14–17-year-old adolescents ($N = 1{,}020$).

[5]In the total sample (unselected for conduct problems), the authors expected to find these two groups as well as a ''normal'' group (low on all three factors) that seemed unlikely to be represented well enough to emerge in the subsample with conduct problems.

 

### *Limitations and Unanswered Questions*

Despite its promising characteristics, there are two key unanswered questions about the YPI. First, to date, the YPI's association with variables that are theoretically relevant to the core interpersonal and affective features of psychopathy has not been investigated. Although the YPI appears to identify a highly antisocial subgroup of adolescents, it is not yet clear that these adolescents possess core features of psychopathy, as hypothesized.

Second, as noted by Andershed, Kerr et al. (2002), ''it remains an empirical question whether the YPI will work with institutionalized youth offenders'' (p. 153). These authors speculated that such self-report measures as the YPI might not work as well the PCL:YV in offender samples, given offenders' (i) greater levels of psychopathic features, including manipulative and deceitful ones that may lead to response bias, and (ii) greater pressure to dissimulate. However, the YPI items were written to assess psychopathic features in an indirect manner. Moreover, youth with psychopathic features, given their narcissism and limited social anxiety, might endorse such features even if they were identified as socially undesirable or malignant. In this study, we address this issue by assessing the relation of the YPI to theoretically relevant variables in an offender sample.

## This Study

The overarching goal of this study is to increase understanding of the nature and manifestations of ''juvenile psychopathy.'' In this article, we assess the convergence between an established, interview-based measure of psychopathy developed with antisocial populations (PCL:YV), and a newer, self-report measure developed with a community sample and a potentially ''purer,'' trait-focused model of psychopathy (YPI). We assess the divergent validity of each measure from the theoretically relevant constructs of anxiety and psychosocial maturity, as well as the utility of each measure in predicting antisocial behavior and violence. The specific aim of this study is to comparatively assess the reliability, covariation, and validity of the PCL:YV and YPI. Notably, this is the first reported use of the YPI in an offender sample, and first assessment of the test–retest reliability of both the YPI and PCL:YV. Estimates of test–retest reliability will be needed to contextualize the results of future studies investigating the longer-term stability of these measures.

# METHOD

To address this aim, we conducted baseline and one-month follow up interviews with juvenile offenders in ''deeper end'' secure correctional facilities. At each interview, participating youth completed the PCL:YV and YPI. At the baseline interview, youth also completed measures of relevant developmental and psychopathological constructs. At the follow-up interview, we assessed the youths' involvement in institutional infractions and violence based on self-report and a subsequent review of records.

 

## Participants

The data for the present study were obtained from an ongoing study of adolescent offenders incarcerated in either secure juvenile or adult correctional facilities in a northeastern state. Based on the gender-restricted population of these facilities, only male offenders ($N = 160$) were sampled. The juveniles were between 14 and 17 years of age ($M = 15.9$, sd $= 0.91$) and the sample was ethnically diverse: African-American (38%), Asian (1%), Hispanic (15%), White (36%), and other (10%). Approximately 55% came from homes where their parents had not attended school beyond the 12th grade.[6]

Recruitment is targeted at obtaining equal numbers of psychopathic ($n = 100$) and non-psychopathic ($n = 100$) participants. To date, 80% of the sample has been obtained (160 of 200 offenders). Potential participants have been screened for psychopathy since the non-psychopathic group was filled. To date, 57 of the 160 youth with complete scores qualify as ''psychopathic,'' based on the traditional PCL:YV cutting score of 30. According to institutional records, participants had an average of 3.8 (sd $= 3.2$) prior offenses with the average age of first arrest and charged offense at 13.2 years of age (sd $= 1.7$). The juveniles were sentenced for a range of committing offenses: 33% for violent crimes against persons (e.g. murder, rape, robbery, assault), 12% for property crimes (e.g. burglary, auto theft, receiving stolen property), 12% for drug related crimes, 4% for weapons offenses, and 39% for procedural offenses (e.g. violation of probation, evading an officer). The average length of incarceration prior to baseline was 4 months (sd $= 4.3$, Range $= 0$–$25$).

## Procedure

Prior to collecting these data, interviewers completed extensive training that included 8 hours of didactic and experiential exercises; viewing, rating, and discussing six videotaped PCL:YV interviews; and observing, rating, and discussing two ''live'' interviews with each other. Interviewers were deemed trained when they had completed this process and had rated six videotaped cases with scores falling within five points of the criterion PCL:YV total score. In addition to the initial training, we also conducted monthly meetings to discuss cases and scoring issues, as well as three ''refresher'' trainings to maintain consistency and reliability in scoring the PCL measures.

In order to recruit participants, interviewers approached incarcerated juveniles between 14 and 17 years of age to participate in the study. These ages were chosen to reflect the current policy trends towards adolescent offenders (adolescents in Pennsylvania may be prosecuted as adults beginning at age 14). Members of the research team described the nature of the study to the juvenile and invited interested youths to participate. Youths were told that they would be asked to complete a baseline interview that would take approximately 2 hours and then be re-contacted for a 1 hour follow-up interview one month later as well as a more comprehensive follow-up interview one year later. Of the youths invited to participate, 7% refused.

[6]Parents' educational status is provided as a proxy for socioeconomic status, as research has indicated that parental education may be the most stable component of an adolescent's family's social class (Steinberg, Mounts, Lamborn, & Dornbusch, 1991).

 

Interested juveniles were provided verbal and written explanations of the study, their confidentiality was assured, and their written assent was obtained. Informed consent was obtained from either a parent/guardian or a participant advocate (a representative who served in lieu of a parent if a parent could not be identified by the youth or institutional file). Prospective participants and their parent/guardians were told that the information provided would not be shared with the staff at the juvenile facility unless they mentioned harming themselves, others, or that they were being harmed themselves. In addition, participants were told that their involvement in the study would not affect their treatment in the facility or their evaluation for parole.

For the baseline interview, participants completed several self-report measures (including the YPI), the PCL:YV, and an intelligence test. During administration of the measures, the participant was instructed to obtain clarification from the interviewer regarding any items of which he was unsure. All items of the self-report measures were read aloud to the participant to avoid potential problems with reading comprehension. To avoid biasing the interviewer's PCL:YV ratings, the participant recorded his answers to the YPI privately. The interview was audio taped (except in Department of Corrections facilities) to limit the need for note-taking and to monitor the quality and consistency of interviews. At the conclusion of the baseline interview, the participant was asked to provide his home address and phone number, as well as that of three close friends or family members who were likely to know how to reach him at the time of the follow-up interviews. After the interview, interviewers reviewed the participant's institutional records to obtain information relevant to scoring the PCL:YV and other measures.

At the one month follow-up, the same procedures as those at baseline were employed. Interviewers did not review the baseline material (e.g. PCL:YV ratings) prior to conducting one month follow-up interviews. Moreover, they completed a new review of records to include the period that had passed since the baseline interview.[7] The average time between baseline and one month interviews was 33 days (sd = 8), and the majority of participants were in secure confinement at the time of the one month follow-up. Youths incarcerated in secure juvenile facilities were paid $10 for the participation at baseline and $25 for their participation at the one month follow-up. Youths incarcerated in adult facilities were prohibited by institutional policies from receiving financial incentives for their participation. The retention rate at the one month follow-up interview was 91%.

## Measures

### *Psychopathy*

Two measures of youth psychopathy were used, including the Psychopathy Checklist: Youth Version (PCL:YV; Forth et al., 2003) and the Youth Psychopathic traits Inventory (YPI: Andershed et al., 2002).

[7]These procedures were used to provide PCL:YV scores with the maximum opportunity for change. Typically, interviewers saw several offenders in between conducting a baseline and one-month follow-up interview with a given individual, rendering it highly unlikely that they would recall their 20-item scores for that person. Prior baseline material, including record material, was made unavailable to encourage relatively independent follow-up assessments. Moreover, new PCL:YV interviews were conducted.

 

*PCL:YV.* The *Psychopathy Checklist—Youth Version* (PCL:YV; Forth et al., 2003), is a 20-item rating scale targeted for use with adolescents 13 years of age or older. Scores on each of the 20 items are based on data collected via interview and review of the youths'' records. The original semi-structured interview guide (Forth et al., 2003) was adapted for use in this study (Skeem & Cauffman, unpublished interview) and reviewed with Adelle Forth. This interview was designed to assess the youth's interpersonal style and attitudes, obtain information on various aspects of his functioning (psychological, educational, occupational, family, and peer domains), and assess (through comparison with records) the credibility of his statements. Following the interview and a review of records, the interviewer used a three-point ordinal scale to indicate how well each of the 20 items applied to the youth.

The generally promising psychometric properties (reliability and validity) of the PCL:YV were reviewed earlier. In this article, we analyze continuous scores (factor and total scores) and dichotomous classifications based on the traditional total threshold score of 30 (psychopathic/non-psychopathic). Our sample size does not yet permit a sound confirmatory factor analysis of the PCL:YV (i.e. a comparison of one- to four-factor models, some of which possess many latent variables), nor an investigation of its invariance across race (see Cooke, Kosson, & Michie, 2001; Kosson, Smith, & Newman, 1990; Skeem, Edens, & Colwell, manuscript under review). For this reason, we report results for both the traditional two-factor PCL:YV model (Factor 1, Factor 2) and Cooke and Michie's revised three-factor model (Interpersonal, Affective, Lifestyle; see Kosson et al., 2002). In this sample, traditional Factors 1 and 2 were moderately correlated ($r = 0.43$). The revised factors were also moderately correlated ($r = 0.29$–$0.37$), with the greatest association between the Affective and Lifestyle factors.

*YPI.* The Youth Psychopathic traits Inventory (Andershed, Kerr et al., 2002) is a 50-item self-report measure. Participants respond to each item on a four-point Likert scale ranging from ''Does not apply at all'' to ''Applies very well'' as to the degree that each statement reflects how they most often think and feel, with higher scores indicating more psychopathic characteristics. The scales and promising psychometric properties of the YPI were described earlier. In this article, we analyze continuous YPI scores (Interpersonal, Affective, Lifestyle, and Total Scores). Average (rather than summed) scores are used, unless otherwise specified. In this sample, the three factors were moderately correlated ($r = 0.45$–$0.59$, with the greatest association between the Interpersonal and Lifestyle Factors). Notably, current sample size constraints prohibit confirmatory factor analyses of the YPI.

## *Maturity*

Maturity was assessed based on self-report measures of psychosocial factors including responsibility, perspective, and temperance as well as resistance to peer pressure. Previous cross-sectional research with adolescents and adults suggests that these measures are reliable indices of the development of mature judgment, in that adolescents typically obtain scores on these measures that reflect lesser maturity

 

than adults (see Cauffman & Steinberg, 2000). Their individual psychometric properties are reviewed below.

*Responsibility. Responsibility* was assessed using the personal responsibility (or "individual adequacy") scale of the Psychosocial Maturity Inventory ($\alpha = 0.84$) (PSMI Form D; Greenberger & Bond, unpublished manual; Greenberger, Josselson, Knerr, & Knerr, 1974). Items on the personal responsibility scale tap self-reliance, identity, and work orientation. Self-reliance measures feelings of internal control and the ability to make decisions without extreme reliance on others (e.g. "Luck decides most things that happen to me" [reverse coded]). Identity measures self-esteem, clarity of the self, and consideration of life goals (e.g. "I change the way I feel and act so often that I sometimes wonder who the 'real' me is" [reverse coded]). Work orientation measures the adolescent's pride in the successful completion of tasks (e.g. "I hate to admit it, but I give up on my work when things go wrong" [reverse coded]). These scales each contain ten items to which subjects respond on a four-point Likert scale ranging from "Strongly agree" to "Strongly disagree," with higher scores indicating more responsible behavior.

As a scale, the PSMI appears to conform to its hypothesized factor structure (Greenberger, Knerr, Knerr, & Brown, 1974) and to posses a theoretically consistent pattern of convergent (e.g. teacher ratings of students' psychosocial maturity) and discriminant (e.g. social desirability) relations with other constructs (Greenberger, Knerr et al., 1974; Josselson, Greenberger, & McConochie, 1974). In a cross-sectional study of 2,568 children, PSMI scores were significantly associated with grade level (5th, 8th, and 11th grade status; Greenberger, Knerr et al., 1974). The PSMI personal responsibility scale has been found to possess hypothesized relationships with indices of personal adjustment (e.g. low anxiety; high self-esteem; Josselson, Greenberger, & McConochie, 1975).

*Perspective.* Perspective was assessed based on several measures. *Time perspective*, or the ability to forsee short- and long-term consequences, was assessed with the eight-item Future Outlook Inventory (FOI; Cauffman & Woolard, unpublished test). Items for this instrument were drawn from various measures of similar constructs (Scheier & Carver, 1985; Strathman, Gleicher, Boninger, & Edwards, 1994; Zimbardo, 1990). Although the psychometric properties of this instrument are still being assessed, our data suggest that it is reliable ($\alpha = 0.74$). The FOI asks participants to rate from 1 to 4 (1, never true, to 4, always true) the degree that each statement applies to them (e.g. "I will keep working at difficult, boring tasks if I know they will help me get ahead later"), with higher scores indicating a greater degree of future consideration and planning.

*Social perspective*, or the ability to take other people's perspectives into account, was measured using a subscale from the Weinberger Adjustment Inventory (WAI, Weinberger & Schwartz, 1990). The WAI asks subjects to describe themselves on five-point Likert scales (1, *almost never*, to 5, *almost always*) regarding what they have usually been like or felt like over the past year or more. The five-item "consideration of others" scale ($\alpha = 0.80$) consists of items such as "before I do something, I think about how it will affect the people around me." The psychometric properties of the WAI are reviewed below.

 

*Temperance.* *Temperance*, or the ability to control one's impulses, was assessed based on two scales from the WAI. A 12-item self-restraint score ($\alpha = 0.82$) was calculated by aggregating subscales measuring impulse control (e.g. "I do things without giving them enough thought" [reverse coded]), and suppression of aggression (e.g. "I lose my temper and 'let people have it' when I'm angry" [reverse coded]).

Thus, we used the WAI to assess both *temperance* (i.e. impulse control; suppression of aggression) and *social perspective* (i.e. consideration of others, above). Studies of the reliability, convergent and divergent validity, and factor structure of the WAI are encouraging (for a review, see Farrell & Sullivan, 2000). For example, self-reported WAI scores correlate moderately with peer- and teacher-based WAI ratings, and WAI subscales relate differentially to external constructs (Weinberger, 1996). The WAI is associated with indices of self-regulated decision making (Miller & Byrnes, 2001) and is predictive of such socially (in)competent behavior as drug use (e.g. Farrell & Danish, 1993).

*Resistance to Peer Pressure.* *Resistance to peer pressure* was assessed using the Resistance to Peer Pressure Inventory (RPP, Steinberg, unpublished test). This measure was developed to assess the weight that adolescents invest in others' opinions. Participants are first presented with two conflicting descriptions (e.g. "Some people go along with their friends just to keep their friends happy" and "Other people refuse to go along with what their friends want to do, even though they know it will make their friends unhappy"), and are asked to choose the description that most accurately depicts the type of person they are. Next, he must decide whether the description is "sort of true" or "really true" for him. The measure contains 10 items, with higher scores indicating greater resistance to peer pressure. The measure was found to have adequate internal consistency ($\alpha = 0.61$). Because this measure is relatively new, few data on its predictive utility and validity are currently available.

## *Anxiety*

Total scores on the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1985) were used to measure of the level of anxiety participants were experiencing. The scale contains 37 items to which participants respond either "Yes" or "No," with higher scores indicating greater anxiety. The RCMAS is internally consistent ($\alpha = 0.83$ in this study; $\alpha = 0.85$ in Reynolds & Richmond, 1985) and possesses moderate test–retest reliability over a 9 month period ($r = 0.63$; Reynolds, 1981). The RCMAS is significantly more strongly associated with other measures of anxiety (e.g. the State–Trait Anxiety Inventory for Children, $r = 0.88$), than it is with measures of depression (e.g. Child Depression Inventory), providing some support for its construct validity (Muris, Merckelbach, Ollendick, King, & Bogie, 2002).

## *Legal History*

Participants' institutional records were used to code their *age at first contact* with the police (the age at which they were first arrested and charged for an offense for which they were subsequently convicted). The *type* and *number of prior offenses* listed in institutional records were also recorded.

 

### *Antisocial and Violent Behavior*

Several measures were used to assess antisocial and violent behavior during the one month follow-up period, based both on self-report and a review of institutional records.

*Infractions.* Youth were asked at the one month follow-up whether they had engaged in 12 forms of institutional misconduct or used alcohol or drugs, based on a structured interview. Their responses were dichotomously coded to indicate whether or not they had committed any (i) *violent and other aggressive infractions* (physically attacked; beat up, mugged, or seriously threatened; raped; attacked with a weapon; or forcibly robbed an inmate or staff member; verbally attacked or chased an inmate or staff member), (ii) *property and substance infractions* (stole or personally damaged others' property; used or sold alcohol or illegal drugs), and (iii) *any infractions* (either of the above) during the one month follow-up.

*Disciplinary actions.* Youths' records were dichotomously coded to reflect whether or not they had been subject to an institutional *disciplinary action* during the one month period.

*Violence.* A dichotomous measure of whether serious violence occurred during the one month follow-up was based both on youths' self report and a review of records. *Violence* was defined as laying hands on someone with the intent to harm them, sexual assault, threatening someone with a weapon in hand, or using a weapon on someone (Lidz, Mulvey, & Gardner, 1993). Based on the assumption that violence is typically under-reported, youth were coded as having been involved in violence if *either* their self-report, a review of their records, or both indicated that they had been violent.

## RESULTS

As a group, participants obtained moderately high traditional PCL:YV total scores (two-factor model, $M = 26.5$, $\text{sd} = 5.7$) and revised PCL:YV total scores (three-factor model, $M = 15.7$, $\text{sd} = 4.1$). Their total YPI scores were also moderately high (average $M = 2.4$, $\text{sd} = 0.5$; sum $M = 133.7$, $\text{sd} = 27.2$). Analyses were designed to comparatively assess the YPI and PCL:YV for (i) their reliability, including their test–retest stability, and (ii) their validity, including their degree of overlap in assessing psychopathy; their predictive utility for institutional infractions, disciplinary actions, and violence; and their association with such theoretically relevant constructs as psychosocial maturity and anxiety. In this section, we address each of these efforts in turn.

### Reliability

Three aspects of reliability were assessed, including the reliability of item sampling, reliability of raters (for the PCL:YV only), and test–retest reliability.

 

Table 1. Internal consistency of the PCL:YV and YPI

| Scale | *N* of items | $\alpha$ |
|---|---|---|
| PCL:YV traditional | | |
| Total score | 20 | 0.73 |
| Factor 1 (Selfish, callous, remorseless use of others) | 8 | 0.64 |
| Factor 2 (Chronically unstable and antisocial lifestyle) | 9 | 0.45 |
| PCL:YV three-factor | | |
| Total score | 13 | 0.66 |
| Interpersonal (Arrogant and deceitful interpersonal style) | 4 | 0.57 |
| Affective (Deficient affective experience) | 4 | 0.56 |
| Lifestyle (Impulsive and irresponsible behavioral style) | 5 | 0.22 |
| Youth psychopathic traits inventory: dimensions | | |
| Total score | 50 | 0.92 |
| Interpersonal (Grandiose, manipulative) | 20 | 0.90 |
| Affective (Callous, unemotional) | 15 | 0.77 |
| Lifestyle (Impulsive, irresponsible) | 15 | 0.83 |
| Youth psychopathic traits inventory: scales | | |
| Dishonest charm | 5 | 0.82 |
| Grandiosity | 5 | 0.61 |
| Lying | 5 | 0.84 |
| Manipulation | 5 | 0.85 |
| Remorselessness | 5 | 0.77 |
| Unemotionality | 5 | 0.68 |
| Callousness | 5 | 0.49 |
| Thrill seeking | 5 | 0.71 |
| Impulsiveness | 5 | 0.70 |
| Irresponsibility | 5 | 0.66 |

### *Reliability of Item Sampling*

As a composite measure of psychopathy, the YPI ($\alpha = 0.92$) was considerably more internally consistent than the PCL:YV ($\alpha = 0.73$). As shown in Table 1, this also was true at the factor level (average $\alpha$, PCL:YV = 0.55; YPI = 0.83). In fact, even the YPI's ten brief subscales (comprised of five items each) were moderately interrelated (average $\alpha = 0.79$, range = 0.49–0.85), suggesting that the YPI captures systematic variance irrespective of scale length. Thus, the YPI assesses attributes more homogeneously than the PCL:YV.

### *Reliability of Raters: PCL:YV*

The YPI's superior internal consistency may in part reflect method invariance. Unlike YPI scores, PCL:YV scores are based on raters' application of item definitions to interview and record data. This process may introduce error variance. To estimate such error, we assessed the agreement among six[8] raters' PCL:YV scores based upon three videotaped cases completed near the end of their training sequence. Notably, this assessment likely overestimates inter-rater agreement

[8]These data represent only six of the nine interviewers currently involved in the study. Nevertheless, the six raters represented in the reliability analyses completed the vast majority (95%) of the baseline and one month follow-up interviews.

 

Table 2. Interrater agreement on PCL:YV items

| Item | Wgt $\kappa$[a] | Item | Wgt $\kappa$[a] |
|---|---|---|---|
| Impression management | 0.27 | Impersonal sexual behavior | 0.80 |
| Grandiose sense of self-worth | 0.47 | Early problem behavior | 0.37 |
| Stimulation seeking | 0.42 | Lacks goals | 0.48 |
| Pathological lying | 0.57 | Impulsivity | 0.20 |
| Manipulation for personal gain | 0.45 | Irresponsibility | 0.43 |
| Lack of remorse/guilt | 0.40 | Failure to accept responsibility | 0.27 |
| Shallow affect | 0.36 | Unstable interpersonal relationships | 0.70 |
| Callous/Lack of empathy | 0.59 | Serious criminal behavior | 0.60 |
| Parasitic orientation | 0.60 | Serious violation of conditional release | 0.32 |
| Poor anger control | 0.70 | Criminal versatility | 0.72 |

[a]Generally, values of less than 0.40 may be considered poor; 0.40–0.59 fair, 0.60–0.74 good; and 0.75 and above excellent (Cichetti & Sparrow, 1981).

because it captures only one source of disagreement: differences among raters in their *use* of the PCL:YV item criteria.[9]

First, to assess intra- and inter-rater reliability for PCL:YV Total and Factor scores, intraclass correlation coefficients (ICCs) were computed using a two-way mixed effects analysis of variance model, with raters as a fixed factor and agreement defined as absolute. According to general guidelines used by Parkerson, Broadhead, and Tse (1993), ICCS above 0.75 are excellent; 0.40–0.75 are fair–good; and below 0.40 are poor. These analyses indicated excellent rates of agreement for PCL:YV Total (ICC = 0.98) and Factor 2 Scores (ICC = 0.95), and good agreement for Factor 1 Scores (ICC = 0.75).[10] Second, to assess chance-corrected levels of agreement at a more specific level, weighted $\kappa$ (Cohen, 1968) was computed (using unit weights) for scores on each of the 20 items. These analyses indicated a fair average level of agreement at the item level (average weighted $\kappa = 0.49$, range = 0.20–0.80). Item by item figures are presented in Table 2. Thus, inter-rater agreement on the PCL:YV appeared adequate at the scale and factor level, as well as on the majority of items.

### *Reliability from Occasion to Occasion*

Given their generally fair levels of inter-rater agreement and internal consistency, we next assessed the test–retest reliability of the PCL:YV and YPI. This form of reliability is crucial, given that it is a pre-requisite to demonstrating longer-term stability in measuring enduring traits of psychopathy. It is generally difficult to separate an instrument's reliability from its stability (Pedhazur & Schmelkin, 1991), although modern test theory proponents purport that this is possible through the use of item response theory (MacDonald & Paunonen, 1999). In an effort to distinguish reliability from stability in a manner most appropriate to these data, we used a one month interval between the initial and retest administrations of the YPI and PCL:YV. This interval length was designed to balance the need to avoid

[9]Potential disagreement based on interviewer differences, respondent differences, and changes from one occasion to the next are not captured because raters observed uniform stimuli. Nevertheless, this form of disagreement arguably is of greatest interest in assessing the PCL:YV.
[10]Due to a coding problem, ICCs for the three-factor PLC:YV model are not available at this time.

 

Table 3. Test–retest reliability of the PCL:YV and YPI

| Scale | ICC |
|---|---|
| PCL:YV traditional | |
| Total score | 0.66 |
| Factor 1 (Interpersonal/affective) | 0.51 |
| Factor 2 (Behavioral/lifestyle) | 0.74 |
| PCL:YV three-factor | |
| Total score | 0.58 |
| Interpersonal | 0.55 |
| Affective | 0.44 |
| Lifestyle | 0.45 |
| Youth psychopathic traits inventory | |
| Total score | 0.74 |
| Interpersonal | 0.65 |
| Affective | 0.68 |
| Lifestyle | 0.79 |

carry-over effects associated with immediate re-administrations (which overestimate reliability) with the need to avoid changes in true scores associated with longer-term development and maturation (which underestimate reliability).

Two points must be noted before presenting these analyses. First, in most (80%) cases, the same interviewer conducted both the baseline PCL:YV interview and the one month follow-up. To isolate the effects of test–retest reliability and control for any unreliability associated with inter-rater disagreement, the analyses reported below were computed based on these interviewer-matched cases ($N = 114$). (Notably, however, analyses completed with the full dataset produced similar results.) Second, due to an oversight early in the study, only 60 of the adolescents completed the YPI at the one month follow-up. Nevertheless, for the basic analyses described below, these 60 pairs of data should produce stable estimates of reliability (Cohen, 1992).

Although these analyses describe average changes at the group level, they do not indicate whether the relative ordering of adolescents from occasion to occasion remains constant. To assess the reproducibility of participants' scores and rank order, intraclass correlation coefficients (ICCs) were computed using a two-way mixed effects analysis of variance model, with administration time as a fixed factor and agreement defined as absolute. As shown in Table 3, these analyses indicated that the PCL:YV (Original Total ICC = 0.66; Three-Factor Total ICC = 0.58) and YPI (Total ICC = 0.74) possessed fair to good test–retest reliability. Thus, of the variance in scores from occasion to occasion, the majority appeared attributable to individual differences among the adolescents themselves (Funk & Dennis, 1999). At the scale level, the factors oriented most heavily toward antisocial behavior (PCL:YV Factor 2; YPI Lifestyle) were the most reliable.

### *Reliability Summary*

In summary, these analyses suggest that both the YPI and PCL:YV are not unduly affected by measurement error associated with item sampling, rater differences, or differences in occasions. The YPI possesses greater internal consistency and test–retest reliability than the PCL:YV, despite the PCL:YV's relatively good inter-rater

 

reliability. Both the YPI and PCL:YV manifest acceptable test–retest reliability. Thus, much of the variance in the measures is systematic. Because reliability is a necessary but not sufficient condition for validity, we next assessed the convergent and discriminant validity of these two measures, as well as their predictive utility.

## Validity

The degree of association between the YPI and PCL:YV was assessed, as well as the relation of these measures to indices of psychosocial maturity and anxiety. The predictive power of each measure for institutional misbehavior was also assessed.

### *Convergent Validity*

*Dimensional.* First, we assessed the nature and degree of covariation between the PCL:YV and YPI. As shown in Table 4, the YPI was weakly to moderately associated with the traditional two-factor PCL:YV ($r = 0.24$) and moderately associated with the three-factor PCL:YV ($r = 0.30$).[11] The YPI was more strongly associated with the core interpersonal and affective features of psychopathy captured by the PCL:YV (Factor 1) than the associated behavioral or antisocial features (Factor 2).

The theoretically coherent pattern of associations among the YPI scales and three PCL:YV factors provided some convergent validity for each of these models. As shown in Table 4, the Interpersonal and Lifestyle scales of the YPI were most strongly associated with the respective scales of the PCL:YV, although the Affective scale was almost equally associated with the Affective and Lifestyle scales of the PCL:YV.

Table 4. Convergent validity: Overlap between the PCL:YV and YPI

| | YPI | | | |
|---|---|---|---|---|
| PCL:YV | Grandiose, manipulative | Callous, unemotional | Impulsive, irresponsible | Total |
| Traditional model | | | | |
| Total | 0.21** | 0.20* | 0.20* | 0.24** |
| Factor 1 (Interpersonal/affective) | 0.29** | 0.20** | 0.21* | 0.29** |
| Factor 2 (Behavioral/lifestyle) | 0.05 | 0.13 | 0.17* | 0.11 |
| Three-factor model | | | | |
| Total | 0.27** | 0.20** | 0.26** | 0.30** |
| Interpersonal | 0.35** | 0.13 | 0.17* | 0.30** |
| Affective | 0.12 | 0.20* | 0.17* | 0.17* |
| Lifestyle | 0.11 | 0.12 | 0.24** | 0.17* |

**$p < 0.01$, *$p < 0.05$.

[11]Essentially identical results were obtained when YPI summed total scores were used rather than average scores for dimensional and ROC analyses. For example, the correlation between traditional PCL:YV total scores and YPI summed total scores was $r = 0.24$, and the AUC for YPI summed total scores was 0.68.

 

Table 5. Indices of accuracy in predicting PCL:YV psychopathy at selected cut-off points on YPI

| Select YPI cut-off scores* (PCL;YV "psychopathic" if $\geq$X) | Sensitivity | Specificity |
|---|---|---|
| 1.50 | 0.97 | 0.13 |
| 1.75 | 0.86 | 0.22 |
| 2.25 | 0.83 | 0.45 |
| 2.50 | 0.63 | 0.63 |
| 2.75 | 0.42 | 0.84 |
| 3.00 | 0.16 | 0.95 |

*The possible range for YPI Total Scores is 1–4.

*ROC.* Next, a receiver operating characteristic (ROC) analysis was performed to (i) identify cut scores for the YPI that would maximize sensitivity and specificity in predicting PCL:YV scores, and (ii) assess the relation between the YPI and PCL:YV classifications of youth as psychopathic and nonpsychopathic in a manner that could easily be compared with other literature. ROC analyses calculate and plot the sensitivity (or true positive rate) by 1−specificity (or false positive rate) of a test at every possible threshold in predicting a criterion (Hanley & McNeil, 1982; Hsiao, Bartko, & Potter, 1989; Metz, 1978; Mossman & Samoza, 1989, 1991; Murphy, Berwick, Weinstein, & Borus, 1987; Vida, 1999). ROC analyses describe the predictive accuracy of a test across a range of possible threshold values, and are less dependent upon the base rates of psychopathy in a sample than are such traditional measures as correlation coefficients.

Table 5 presents the sensitivity and specificity of various YPI total scores for predicting PCL:YV status as "psychopathic," using the traditional, but unvalidated, PCL:YV threshold score of 30. The results indicate that a threshold of approximately 2.5 yields an optimal balance between the sensitivity and the specificity of the YPI in predicting PCL:YV psychopathy in this sample. The AUC, or area under the curve, generated by the ROC may be interpreted as the probability of correctly distinguishing between a subject above the PCL:YV cut-off and a subject below the cut-off. The AUC for the YPI total score was 0.68 (SE = 0.05), indicating a 68% chance that a youth deemed psychopathic by the PCL:YV would score more highly than a randomly chosen youth not deemed psychopathic.

*Categorical.* As noted earlier, the YPI was designed to identify a categorical subgroup of youth who were persistently antisocial and "psychopathic-like." Thus, youths' YPI scores were cluster analyzed and then the resulting subgroups' PCL:YV scores and (unvalidated) PCL:YV classifications compared. Ward's method (with $d^2$ as the measure of distance) was used to cluster the youth on their YPI Interpersonal, Affective, and Lifestyle scale scores. Because this method is often unduly affected by profile elevation (Blashfield & Aldenderfer, 1988; Aldenderfer & Blashfield, 1984), deviation scores were used as the unit of analysis (see Cronbach & Gleser, 1953, p. 460). The scree method, variance ratio criterion (Milligan & Cooper, 1985), and interpretability of the solutions all clearly suggested a two-cluster solution ($n = 129$; $n = 31$). A comparison of these two groups indicated no significant differences in their PCL:YV total scores. Also, the chance-corrected rate of agreement between YPI cluster membership and (unvalidated) PCL:YV

 

classifications of youth as psychopathic was poor ($\kappa = 0.09$; uncorrected agreement = 63%).

### *Divergent Validity*

To assess the YPI and PCL:YV's divergent validity, their relations with anxiety and psychosocial maturity were assessed. First, as noted in the introduction, if the YPI and PCL:YV assess core traits of psychopathy they should, according to classic theories and recent research, be inversely associated with anxiety. Second, if these measures assess a core set of stable psychopathic traits, they should be more strongly correlated with one another than with measures of maturity. This is a key aspect of these measures' divergent validity, given that some psychopathic traits (e.g. callousness, sensation-seeking) can be framed as deficits in maturity (e.g. perspective-taking, temperance). Psychopathy and immaturity are, at best, phenotypically similar constructs. Although a few of their features overlap, psychopathy is a distinctive constellation of enduring personality traits (see, e.g., Hare, 2003), whereas (im)maturity is a broad set of (in)capacities associated with normative phases of development (see, e.g., Greenberger, Knerr et al., 1974). Thus, in this study, we assess the extent to which measures of juvenile psychopathy (one construct) are more strongly associated with one another than they are with measures of maturity (a different, but similar construct; see Campbell & Fiske, 1959).

*Anxiety.* The relation between anxiety and the YPI was more theoretically coherent than that with the PCL:YV. Specifically, anxiety was unrelated to both the traditional two-factor PCL:YV (RCMAS Anxiety, $r = -0.04$, $-0.05, 0.01$ for Total, Factor 1, and Factor 2 scores, respectively) and three-factor PCL:YV ($r = -0.02$, 0.05, $-0.01$, 0.02 for Total, Interpersonal, Affective, and Lifestyle scores, respectively). Notably, the unique associations between anxiety and each of the PCL:YV's two and three factors were also nonsignificant. In contrast, YPI Total scores ($r = -0.24$, $p < 0.01$) and Interpersonal ($r = -0.19$, $p < 0.05$), and Lifestyle ($r = -0.31$, $p < 0.01$) dimension scores were inversely associated with anxiety. An analysis of the unique associations between anxiety and the three YPI dimensions revealed that this association was chiefly attributable to the Lifestyle dimension (partial $r = -0.24$).

*Psychosocial maturity.* To assess the degree of overall relative relation between the measures of psychopathy and measures of psychosocial maturity, three linear regressions were performed in which the six measures of maturity were entered as a block to predict total scores on each of the three psychopathy measures (original PCL:YV, three factor PCL:YV, YPI).[12] These analyses revealed that the YPI ($R = 0.46$, $p < 0.001$) was most strongly associated with the maturity measures, followed by the original PCL:YV ($R = 0.37$, $p < 0.01$) and the three-factor PCL:YV ($R = 0.31$, $p < 05$). The YPI's stronger association with these maturity measures may be due in part to shared method variance, given that both measures were based

[12]Notably, similar results were obtained when we controlled for participants' age before assessing the relation between measures of psychopathy and maturity. Because controlling for age suppresses some of the very variance of maturity itself, and we are interested in comparing the relative zero-order relationships among convergent and divergent validity measures, we report the zero-order relationships here.

 

Table 6. Divergent validity: Maturity correlates

| | Maturity | | | | |
|---|---|---|---|---|---|
| Psychopathy | Responsibility | Time perspective | Social perspective | Temp-erance | Resistance to peer pressure |
| PCL:YV traditional | | | | | |
| Total score | −0.19* | −0.10 | −0.22** | −0.29** | 0.01 |
| Factor 1 (Interpersonal/aff.) | −0.07 | −0.13 | −0.17* | −0.30** | 0.06 |
| Factor 2 (Behavioral/lifest.) | −0.13 | −0.14 | −0.23** | −0.26** | −0.08 |
| PCL:YV three-factor | | | | | |
| Total score | −0.09 | −0.18* | −0.19* | −0.30** | 0.01 |
| Interpersonal | −0.06 | −0.03 | −0.16 | −0.28** | 0.05 |
| Affective | −0.05 | −0.18* | −0.22** | −0.20* | 0.04 |
| Lifestyle | −0.10 | −0.21** | −0.13 | −0.19* | −0.08 |
| Youth Psychopathic traits Inventory | | | | | |
| Total score | −0.22** | −0.18* | −0.18* | −0.44** | −0.19* |
| Interpersonal | −0.15 | −0.04 | −0.06 | −0.30** | −0.16* |
| Affective | −0.16 | −0.21** | −0.25** | −0.31** | −0.06 |
| Lifestyle | −0.29** | −0.34** | −0.24** | −0.56** | −0.26** |

* $p < 0.05$, ** $p < 0.01$.

on self-report. As shown in Table 6, the two measures of psychopathy were most strongly inversely associated with Temperance (the ability to control one's impulses) and, to a lesser extent, Social Perspective and Time Perspective. The YPI, but not the PCL:YV, was also significantly associated with Responsibility and Resistance to Peer Pressure (inversely).

### *Postdictive and Predictive Utility*

To assess the relative predictive utility of these tools, analyses were completed to assess the relation between the YPI and PCL:YV and theoretically relevant behavioral correlates, both historical and prospective.

*Postdictive utility.* First, we assessed the relation between these measures and indices of past antisocial behavior coded from youths' records. Because the original two-factor PCL:YV includes items that directly code past antisocial behavior, the three-factor PCL:YV was used for these analyses to avoid predictor-criterion overlap. In brief, none of the measures significantly postdicted antisocial behavior. Youths' total scores on the three-factor PCL:YV and YPI were not significantly associated with their age at first contact ($r = 0.05$, $r = 0.11$, respectively), offense rate ($r = 0.08$, $r = -0.09$), or number of person-related charges ($r = 0.07$, $r = 0.12$). A similar pattern of non-significance was observed at the factor level for both measures, with the (perhaps chance-based) exception of the *positive* relation found between the PCL:YV Affective factor and age at first contact ($r = 0.20$, $p < 0.05$).

*Predictive utility.* Next, we assessed the utility of the YPI and PCL:YV in predicting institutional infractions, disciplinary actions, and violence during the one month follow-up. To contextualize these results, we provide the base rates of these behaviors before presenting their relation to these measures of psychopathy. During

 

the one month follow-up period, 56% of youth reported committing at least one institutional infraction. Some 46% of youth reported at least one violent or other aggressive infraction, and 22% reported at least one property or substance-related infraction. During the same period, 16% of youth were written up disciplinary actions, the most common type of which was being placed on restriction (which accounted for 63% of the most serious actions).

Violence was assessed by combining information obtained from records and self-report. The base rate of violence in this study (as defined above) was 29%. According to self-report, 23% of youth were involved in at least one violent incident, the most common form of which was ''hitting or beating up'' someone (which accounted for 68% of the most serious incidents). According to records, 10% of youth were involved in at least one violent incident. Thus, in keeping with past research (Monahan et al., 2001), we identified more violence via self-report (27% unique incidents) than records (4% unique incidents). Nevertheless, there was a fair rate of agreement (78%) between youths and records about whether violence had occurred, which provides support for combing reports.

ROC analyses were conducted to assess the utility of the PCL:YV (two- and three-factor model) and YPI in predicting infractions, disciplinary actions, and violence. As shown in Table 7, the YPI, but not the PCL:YV, significantly predicted infractions (any, violent/aggressive, and property/substance). In contrast, the PCL:YV, but not the YPI, significantly predicted the rarer occurrence of disciplinary actions and violence.

## *Validity Summary*

In summary, the YPI was moderately associated with the PCL:YV, particularly the ''Factor 1'' 'or interpersonal and affective features' of the latter instrument. The YPI, and, to a somewhat lesser extent, the PCL:YV, were associated with

Table 7. Predictive utility: Institutional infractions, disciplinary actions, and violence[a]

| | Infractions | | | | |
|---|---|---|---|---|---|
| Psychopathy | Any | Violent/aggressive | Property/substance | Disciplinary action | Violence |
| PCL:YV two-factor | | | | | |
| Total Score | 0.58 | 0.59 | 0.59 | 0.67* | 0.65** |
| Factor 1 | 0.55 | 0.58 | 0.52 | 0.63 | 0.62* |
| Factor 2 | 0.60 | 0.58 | 0.65* | 0.64 | 0.61 |
| PCL:YV three-factor | | | | | |
| Total score | 0.55 | 0.57 | 0.56 | 0.65* | 0.62* |
| Interpersonal | 0.53 | 0.55 | 0.50 | 0.56 | 0.62* |
| Affective | 0.56 | 0.59* | 0.54 | 0.68* | 0.59 |
| Lifestyle | 0.52 | 0.51 | 0.61 | 0.62 | 0.54 |
| YPI | | | | | |
| Total score | 0.66** | 0.63* | 0.67** | 0.48 | 0.51 |
| Interpersonal | 0.60* | 0.58 | 0.62 | 0.50 | 0.49 |
| Affective | 0.64** | 0.61* | 0.66* | 0.54 | 0.54 |
| Lifestyle | 0.69*** | 0.68*** | 0.67** | 0.48 | 0.53 |

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.
[a]Figures reflect AUC values from ROC analyses.

 

psychosocial measures of maturity. In fact, the measures of juvenile psychopathy were more strongly associated with these measures of maturity than they were with one another. The YPI, but not the PCL:YV, bore a theoretically coherent inverse association with anxiety. The YPI was significantly predictive of a range of institutional infractions, whereas the PCL:YV was significantly predictive of disciplinary actions and violence.

# DISCUSSION

Although this comparison of two approaches to the conceptualization of juvenile psychopathy yielded no unequivocal "winner," this was not its purpose. Instead, this study contributes several key points to our understanding of juvenile psychopathy. First, these two conceptualizations of juvenile psychopathy overlap only partially, despite their common roots in adult models of psychopathy. The YPI's trait-focused conceptualization corresponds only moderately with the more broadly-based PCL:YV model, sharing negligible variance with the PCL:YV's behavioral features. Second, these two models significantly predict different forms of short-term deviant behavior, with the YPI predicting a range of institutional infractions, and the PCL:YV predicting disciplinary actions and violence. Third, the YPI, but not PCL:YV, model of juvenile psychopathy possesses a theoretically coherent, inverse association with anxiety. Fourth, however, both models moderately overlap with psychosocial maturity, particularly "Temperance." In fact, these models of juvenile psychopathy are more strongly associated with psychosocial maturity than with one another, raising questions about their construct validity. Finally, both measures possess adequate test–retest reliability, providing a foundation for investigating their longer-term stability during the transition from adolescence to adulthood in future research. In this section, we discuss each of these findings in turn.

## Alternate Conceptions of Juvenile Psychopathy

Although the YPI and PCL:YV conceptions of juvenile psychopathy overlap somewhat, each focuses on different features. YPI total scores are moderately (AUC = 0.68) predictive of traditional PCL:YV classifications of youth as "psychopathic." As expected, the YPI relates more strongly to the relatively "pure" three-factor PCL:YV model (13 items, $r = 0.30$) than its more nonspecific, traditional two-factor model (20 items, $r = 0.24$). The YPI focuses more narrowly than the PCL:YV on core interpersonal and affective features of psychopathy (Factor 1, $r = 0.29$), with less emphasis on behavioral features (Factor 2, $r = 0.11$). Notably, the YPI's Interpersonal, Affective, and Lifestyle dimensions are most strongly associated with the respective scales of the PCL:YV's three-factor model, providing some support for the convergent validity of each of these models. However, this pattern of correlations does not indicate whether or not the two measures "assess the same thing." More compelling evidence of convergent validity would be obtained by comparing the measures with a structural equation modeling-based approach. This is an important topic to address in future research.

 

Given debate about whether psychopathy is a dimensional or categorical construct (Skilling, Quinsey, & Craig, 2001; see also Skeem, Mulvey, & Grisso, 2003), we supplemented these dimensional analyses with categorical analyses. Based on a cluster analysis of these youths' YPI scores, we identified two groups of offenders. However, these groups did not differ in their PCL:YV scores, and there was limited agreement (63%) between the two measures in their classification of youth as "psychopathy-like" or psychopathic. Given the finding by Skilling et al. (2001) that interpersonal and affective features of psychopathy are more indicative of a psychopathy taxon in youth than behavioral or antisocial features, it is not clear whether PCL:YV classifications are always more correct than those of the YPI. They are, however, often different.[13]

In our view, it is remarkable that the dimensional YPI and PCL:YV are at least moderately associated, given that each (i) relies upon a different method of measurement and different sources of information (i.e. self-report versus ratings based on interview and record data), (ii) reflects somewhat different conceptions of juvenile psychopathy, and (iii) targets different populations (offenders versus general youth). The YPI relates more strongly to PCL:YV Factor 1 than Factor 2 traits, as it was designed to do. As discussed earlier, this is relatively rare for self-report measures of adult psychopathy. Extant data are limited, but suggest that this may also be rare for self-report measures of juvenile psychopathy (see Forth & Mailloux, 2000). For example, based on a sample of 117 juvenile offenders, Murrie and Cornell (2002) assessed the correspondence between the PCL:YV, a self-report version of the Antisocial Process Screening Device (APSD, Caputo et al., 1999; Frick & Hare, 2001), and the "Psychopathy Content Scale" of the Millon Adolescent Clinical Inventory (PCS, Murrie & Cornell, 2000; MACI, Millon, 1993). Both the APSD and PCS were moderately associated with the PCL:YV ($r = 0.30$, 0.49, respectively). However, both measures were more strongly associated with PCL:YV Factor 2 ($r = 0.38$, 0.56, respectively) than Factor 1 ($r = 0.18$, 0.28, respectively).[14]

Given controversy over the validity and nature of "juvenile psychopathy," there is no clear gold standard for its assessment. If a direct extension of the adult model of psychopathy to juveniles is shown to be appropriate, the PCL:YV holds promise for becoming such a standard (see Murrie & Cornell, 2002). However, given its imperfections (see above), we do not hold up the PCL:YV as the unequivocal yardstick for the YPI. Our results suggest that the PCL:YV and YPI capture somewhat different aspects of psychopathy and relate in a different manner to external variables. Each measure possesses strengths and weaknesses that may, over time, facilitate understanding of juvenile psychopathy.

[13]It is possible that the association between self-report and interview-based measures would be higher in a non-referred than referred sample. Future research must determine the extent to which the convergent validity findings of this study generalize to nonreferred community samples. An obstacle to such research is the lack of a PCL measure that would be appropriate for community samples.

[14]Two additional studies (one unpublished; one of adults) are noteworthy. First, in an unpublished doctoral dissertation, Cruise (2001) found that the self-report version of the APSD was relatively strongly associated with the PCL:YV, with most of the shared variance attributable to PCL:YV Factor 1 (CU, $r = 0.52$, I/CP $= 0.42$) rather than Factor 2 (CU, $r = 0.15$, I/CP, $r = 0.26$). Second, Poythress et al. (1998) found that the PPI was relatively strongly associated with PCL-R Total ($r = 0.54$), Factor 1 ($r = 0.54$), and Factor 2 ($r = 0.40$) scores. However, this was a study of 50 young adults ($M$ age $= 19$ years), using adult measures of psychopathy.

 

## Differential Utility in Predicting Deviant Behavior

Although neither the YPI nor PCL:YV was associated with youths' history of antisocial behavior, each measure significantly predicted different forms of future deviant conduct. The lack of relation between these measures and offenders' past rate of offenses and number of person-related charges is noteworthy because it contradicts the generally moderate associations found in past research with the YPI (Andershed, Kerr et al., 2002) and PCL:YV (Kosson et al., 2002; see Forth & Mailloux, 2000). These measures also failed to postdict offenders' age at first contact with the police in this study, in contrast with prior YPI (Andershed, Kerr et al., 2002) and most PCL:YV research (Brandt et al., 1997; Forth, 1995; Forth, Hart, & Hare, 1990; cf. Kosson et al., 2002). These findings may be partially attributable to the nature of our ''deep end'' adolescent sample, which has multiple prior offenses, person-related crimes, and early police contacts. As observed by Frick and Ellis (1999), children with serious behavior problems may be distinguished into two types: ''Primarily Impulsive'' and ''Callous–Unemotional'' (psychopathic-like). Simply put, early onset conduct disorder and frequent antisocial behavior may not necessarily be specific to psychopathy.

Despite their lack of relation with past antisocial conduct, both measures of juvenile psychopathy were predictive of misconduct during a brief, one month period. This suggests that each tool (whatever construct it taps) may be useful in making short-term decisions about young offenders' placements. The type of behavior that these measures predicted, however, was largely non-overlapping. The YPI (particularly the Lifestyle dimension) better predicted a range of institutional infractions (AUC = 0.66) than the traditional PCL:YV (AUC = 0.58). Thus, the YPI may be useful for assessing the risk of relatively common forms of institutional misconduct, from drug-related to aggressive and violent infractions. In contrast, the PCL:YV (particularly the Affective dimension) predicted disciplinary actions taken against youth (AUC = 0.67) better than the YPI (AUC = 0.48), suggesting that the PCL:YV may be more useful for assessing the short-term risk of serious misbehavior deemed worthy of action. Similarly, the PCL:YV, but not the YPI, significantly predicted serious violence during this short follow-up period.

## Differential Utility in Identifying the Low Anxiety, Primary Psychopath

Despite the recent literature's emphasis on psychopathy's utility in predicting antisocial conduct, many personality theorists believe that such conduct is neither specific to, nor a central feature of, psychopathic personality disorder (see Blackburn, 1998; Cleckley, 1941; Karpman, 1941; Lilienfeld, Purcell, & Jones-Alexander, 1997; McCord & McCord, 1964). Several scholars believe that a central feature of primary psychopathy is a lack of anxiety or negative affectivity, which uniquely distinguishes psychopaths from others with impulsive and antisocial behavior (Cleckley, 1964; Karpman, 1941, 1948; Lykken, 1995; for a review, see Skeem, Mulvey, & Grisso, 2003).

As noted earlier, the work of Newman and others with adults provides compelling evidence for the notion that ''low anxious,'' primary psychopaths differ from ''high

 

anxious,'' secondary psychopaths on putative etiological markers. There also is preliminary evidence that ''low anxious'' children with key features of psychopathy can be identified. Specifically, Frick (1996) found that, after controlling for the number of conduct problems, the APSD's Callous–Unemotional (CU) scale was inversely associated with a measure of anxiety and negative affectivity (partial $r = -0.28$). He concluded that ''when one equates for the number of conduct problems a child exhibits, a child with high scores on the CU scale will show less distress or anxiety than those with lower scores'' (p. 50).

In keeping with Frick's results, in this study, the YPI was moderately inversely associated with anxiety ($r = -0.24$). However, the PCL:YV was unrelated to anxiety ($r = -0.04$). This suggests that, unlike the PCL:YV, the YPI tends to identify individuals with psychopathy-like features including a lack of anxiety. Notably, however, it is chiefly the YPI's Lifestyle (rather than Interpersonal or Affective) dimension that does so. Although the lack of relation between the PCL:YV and anxiety is inconsistent with the *positive* association recently observed by Kosson et al. (2002) in a sample of youth probationers, it is consistent with results obtained by Brandt et al. (1997) in a sample of incarcerated youth, and with adult findings based on the PCL-R. Together, these results suggest that the PCL measures may not uniquely identify individuals with primary psychopathy (see Schmitt & Newman, 1999). Clearly, exploring the extent to which the PCL:YV identifies primary, secondary, or other variants of psychopathy is a topic worthy of further investigation (see Skeem, Poythress et al., 2003b).

## Shared Association with Psychosocial Maturity

A substantial body of research in developmental psychopathology questions the assumption that constructs developed with adults may simply be extended downward to youth and children. It may be that juvenile psychopathy either (i) does not exist because personality does not crystallize until late adolescence or early adulthood, or (ii) manifests in a different way than psychopathy in adulthood (see Hart et al., 2002). Because several adult traits of psychopathy may be viewed as normative features of adolescence, it is crucial to assess the extent to which the YPI and PCL:YV's downward extensions of the adult model of psychopathy tap changeable aspects of developmental maturity rather than stable traits of a personality disorder.

The results of this study suggest that both measures have room for improvement in this crucial aspect of divergent construct validity. Both the PCL:YV ($R = 0.37$) and YPI ($R = 0.46$) are moderately associated with psychosocial maturity.[15] In fact, these two measures of juvenile psychopathy overlap more with these measures of maturity than they do with one another, violating a basic principle of construct validation (see Campbell & Fiske, 1959). Two measures of the same construct (juvenile psychopathy) should be more strongly associated with one another than with a measure of a similar, but different construct (maturity). This should be true even when the same

[15]Notably, the YPI was positively associated with indices of responsibility. However, the overall association between maturity, the YPI, and the PCL:YV remained unchanged when responsibility was excluded.

 

construct (juvenile psychopathy) is assessed via different methods (e.g. interview versus self-report). This was not the case in this study. These measures of psychopathy, a distinctive constellation of enduring personality traits, were less strongly associated with one another than with measures of immaturity, a broad set of incapacities associated with normative phases of development.

Although it assesses fewer ostensibly developmentally loaded features than the PCL:YV, the YPI was somewhat more strongly and broadly associated with psychosocial maturity than the PCL:YV. This likely is partially attributable to shared method variance, given that both the YPI and measures of maturity are based on self-report. Future research that closely adheres to a multi-trait, multi-method design is necessary to fully address this issue. Nevertheless, the results of this study suggest that even the reduced set of adult features of psychopathy assessed by the YPI are associated with psychosocial markers of maturity.

Although the global pattern of association among measures of juvenile psychopathy (convergent) and maturity (divergent) raises a question about the construct validity of the PCL:YV and YPI, the nuances of the pattern also raise important issues to address in future research. Both the PCL:YV and YPI shared the greatest variance with Temperance (the ability to control one's impulses) and Social Perspective (the ability to take others' views into account). However, the YPI and three-factor PCL:YV also were associated with Time Perspective (the ability to foresee consequences), and the YPI was associated with Responsibility (i.e. self-reliance, identity, and work orientation). Cross-sectional research conducted with similar measures of maturity in both community-based (Cauffman & Steinberg, 2000) and offender populations (Cauffman, 2002; Cauffman & Skeem, 2002) indicates that Temperance, Perspective, and Responsibility increase significantly from adolescence through early adulthood. With respect to Temperance in particular, independent evidence suggests that sensation and thrill seeking increase from mid- to late adolescence and then decline over the course of adulthood (Giambra, Camp, & Grodsky, 1992; Zuckerman, Eysenck, & Eysenck, 1978).

The relation between age and psychosocial maturity found in previous cross-sectional research needs to be replicated in longitudinal research that follows the same individuals over time. The facets of maturity (e.g., Temperance; Social Perspective) that overlap to the greatest extent with measures of psychopathy are expected, given the nature of psychopathic traits that can be reframed as immaturity. Longitudinal research must be conducted to disentangle stable traits of psychopathy from malleable characteristics of maturity during the transition from adolescence to adulthood. Such research could help determine the extent to which "adolescent" sensation and thrill seeking overlaps with traits of impulsivity (within individuals), and whether adolescents at the extremes of sensation and thrill seeking mature into adults with pronounced traits of impulsivity (within groups). In our future work, we intend to address such issues by examining the extent to which any changes in juvenile psychopathy and psychosocial maturity covary as adolescents grow older.

## Shared Test–Retest Reliability

One of the most significant findings of this study is that both the YPI and PCL:YV possess great enough test–retest reliability at the scale level to support such

 

investigations of long-term stability. Of note, however, is the weaker test–retest reliability of the PCL:YV three-factor than two-factor model. The revised PCL:YV model's Lifestyle factor (ICC = 0.45) was remarkably less reliable than the traditional PCL:YV model's Factor 2 (ICC = 0.74). In keeping with the results above, this finding raises a question about the extent to which a history of socially deviant and antisocial behavior (which cannot decrease) may account for the reliability of behavioral characteristics of psychopathy during adolescence. Again, longitudinal research will be necessary to determine the extent to which stimulation seeking and impulsivity are traits of psychopathy, features of developmental maturity, or both.

## CONCLUSION

This study indicates that the two alternative conceptualizations of juvenile psychopathy and modes of assessment embodied in the PCL:YV and the YPI are only partially overlapping. Although each approach is reliable and reasonably useful in predicting immediate antisocial behavior, only the YPI, which focuses more narrowly on the interpersonal and affective traits of psychopathy than the PCL:YV, bears a theoretically consistent, inverse association with anxiety. This study is the first to employ the YPI in a delinquent population, and suggests that in such populations the YPI holds promise as an alternative and practical lens for increasing our understanding of the manifestations, course, and eventually, etiology of juvenile psychopathy. It contributes a complementary (though not necessarily more valid) view of this construct to such mainstream measures as the PCL:YV.

More fundamentally, this study indicates that a key question about juvenile psychopathy remains unresolved. We found that two alternative conceptualizations of juvenile psychopathy were less associated with one another than with psychosocial markers of developmental maturity. This raises questions about the measures' construct validity and seems inconsistent with the notion that adult models of psychopathy can simply be extended downward to youth. Future longitudinal research will help to determine the limits of our ability to identify psychopathy before personality has crystallized, and to clarify the nature of any signs and symptoms that are specific to particular developmental stages. By establishing the test–retest reliability of measures of juvenile psychopathy, the present study lays an important foundation for such longer-term study.

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